LOCAL HAZARD MITIGATION PLAN REVIEW CROSSWALK

Jurisdiction: Fergus County, Montana Pre-Disaster Mitigation Plan

September 2007

Local Mitigation Plan Review and Approval Status Title of Plan: Fergus County, Montana Pre-Date of Plan: September 2007 Jurisdiction: Fergus County Disaster Mitigation Plan Address: **Local Point of Contact:** Cheri Kilby P.O Box 108 Lewistown, MT 59457 Title: Disaster and Emergency Services Coordinator Agency: Fergus County, Montana Phone Number: E-Mail: des@co.fergus.mt.us 406.535.8118

State Reviewer:	Title:	Date:	
Kent Atwood	State Hazard Mitigation Officer	December 18, 2007	

FEMA Reviewer(s):	Title:	Date:
Jennifer Hillhouse	Planner, URS Corporation	February 4, 2008
Marie-Annette (Nan) Johnson	Planner, FEMA Region VIII Mitigation Planner	February – September 2008
Date Received in FEMA Region VIII	1/9/08	
Plan Not Approved		
Plan Approved	xxxxxxxx	
Date Approved	September 10, 2008	

		NFIP Status*					
Jurisdiction:	Υ	N	N/A	CRS Class			
1. Fergus County-Participating 12/01/82. Current Effective FIRM Date 12/01/82	X						
2. City of Lewistown-Participating 07/19/82. Current Effective FIRM Date 07/19/82	×						
3. Town of Denton-Participating 07/19/82. Current Effective FIRM Date 07/19/82							
4. Town of Grass Range - Sanctioned 09/21/93 (Withdrawn Community) Current Effective FIRM Date 12/01/82		x					
5. Town of Moore-Participating 07/19/82. Current Effective FIRM Date 07/19/82	X						
6. Town of Winifred-Not included in Community Status Book Report		X					

^{*} Notes:

Y = Participating

N = Not Participating

September 2007

LOCAL MITIGATION PLAN REVIEW SUMMARY

The plan cannot be approved if the plan has not been formally adopted.

Each requirement includes separate elements. All elements of the requirement must be rated "Satisfactory" in order for the requirement to be fulfilled and receive a score of "Satisfactory." Elements of each requirement are listed on the following pages of the Plan Review Crosswalk. A "Needs Improvement" score on elements shaded in gray (recommended but not required) will not preclude the plan from passing. Reviewer's comments must be provided for requirements receiving a "Needs Improvement" score.

SCORING SYSTEM

Please check one of the following for each requirement.

- N Needs Improvement: The plan does not meet the minimum for the requirement. Reviewer's comments must be provided.
- S Satisfactory: The plan meets the minimum for the requirement. Reviewer's comments are encouraged, but not required.

Prerequisite(s) (Check Applicable Box)	STAFE	FORD	FM.	<u>A</u>
	NOT MET	MET	NOT MET	MET
Adoption by the Local Governing Body: §201.6(c)(5) and §78.5(f)				
OR				
Multi-Jurisdictional Plan Adoption: §201.6(c)(5) and and §78.5(f) AND		х		х
Multi-Jurisdictional Planning Participation: §201.6(a)(3) and and §78.5(a)		х		х
Planning Process	N	S	N	S
Documentation of the Planning Process: §201.6(b) and §201.6(c)(1) and §78.5(a)		х		х
Risk Assessment	N	S	N	S
ldentifying Hazards: §201.6(c)(2)(i) and §78.5(b)		х		Х
Profiling Hazards: §201.6(c)(2)(i) and §78.5(b)		х		Х
Assessing Vulnerability: Overview: §201.6(c)(2)(ii) and §78.5(b)		х		х
Assessing Vulnerability: Identifying Structures: §201.6(c)(2)(ii)(A) and §78.5(b)		Х	х	
Assessing Vulnerability: Estimating Potential Losses: §201.6(c)(2)(ii)(B)		x		X
Assessing Vulnerability: Analyzing Development Trends: §201.6(c)(2)(ii)(C)		х		X
Multi-Jurisdictional Risk Assessment: §201.6(c)(2)(iii) and FEMA 299		х		X

Mitigation Strategy	STAF	FORD	<u>FN</u>	AN
	N	s	N	S
Local Hazard Mitigation Goals: §201.6(c)(3)(i) and §78.5(c)		х		х
ldentification and Analysis of Mitigation Actions: §201.6(c)(3)(ii) and §78.5(d)		х		Х
Implementation of Mitigation Actions: §201.6(c)(3)(iii) and §78.5(d) and (e)		Х		х
Multi-Jurisdictional Mitigation Actions: §201.6(c)(3)(iv) and FEMA 299		х		х
Plan Maintenance Process	<u>STAFI</u>	FORD	FN	<u>AA</u>
	N	S	N	S

Plan Maintenance Process	STAF	FORD	FN	<u>//A</u>
	N	S	N	S
Monitoring, Evaluating, and Updating the Plan: §201.6(c)(4)(i) and §78.5(e)		х		х
Incorporation into Existing Planning Mechanisms: §201.6(c)(4)(ii)		х		х
Continued Public Involvement: §201.6(c)(4)(iii)		Х		Х

Additional State Requirements*	STAF	FORD	<u>FMA</u>		
	N	s	N	s	
Insert State Requirement					
Insert State Requirement					
Insert State Requirement					

LOCAL MITIGATION PLAN APPROVAL STATUS	STAFFORD	<u>FMA</u>	
PLAN NOT APPROVED		X	

*States that have additional requirements can add them in the appropriate section	ns of
the Multi-Hazard Mitigation Planning Guidance or create a new section and mod	
this Plan Review Crosswalk to record the score for those requirements.	•

PLAN APPROVED

See Reviewer's Comments

September 2007

Reviewer's Comments: An Overview of the Fergus County Plan

Overall Comments

The plan met the Stafford requirements under 44 CFR Part 201.6. The plan did not satisfactorily meet FMA requirements under 44 CFR Part 78.5 due to the omission of the identification of repetitive loss structures. The plan was very strong in meeting most element requirements and was reader friendly in its organization. It also provided sound documentation of the planning process and the risk assessment in general.

Plan Organization/Format

The Plan was well organized and the flow of the document was logical and easy to follow making it easy to identify met requirements. The organization of the plan generally followed the outline of the Local Hazard Mitigation Plan Review Crosswalk.

Public/Stakeholder Participation & the Planning Process

The Plan exhibited several strengths in regards to the planning process including a good description, a list of the involved parties and individuals, and how they participated. Supporting documentation such as meeting agendas, sign in sheets and meeting announcements are included in the Appendix.

Risk Assessment

In general, the Plan provided an excellent description of hazards and utilized great resources to compile data. The plan would be improved if all documented events were included in the plan. Although the Plan includes a discussion on wildfire within the risk assessment, the plan would be strengthened if more detailed information and specifics from the Fergus County CWPP were included within the risk assessment of the Plan. In order to continue to strengthen the required planning elements in future revisions, concentrate on mapping hazard locations to identify a comprehensive tool and identify repetitive loss properties. The Plan could also be strengthened if a table was included that lists the location of hazard, date, time, magnitude, death, injuries, property damage and crop damage for each hazard. The plan did not pass FMA requirements as structures that have suffered repetitive flood losses were not identified or evaluated in the plan.

Mitigation Strategy

The plan includes a total of four goals of which two are related to specific natural hazards (flood and wildfire) and are mitigation focused. The plan also includes a comprehensive range of mitigation actions and projects, which are clearly tied to the risk assessment. The plan includes a discussion on how the mitigation strategies will be implemented and administered.

Plan Maintenance

The Plan provided a strong description of the method and schedule of monitoring, evaluating, and updating the mitigation plan.

September 2007

About Plan & Crosswalk Reviews in General:

Your multi-hazard mitigation plan's review includes <u>five required DMA & FMA components</u>: adoptions by the participating jurisdictions, consideration of the public/stakeholder participation and planning process, the risk assessment, the mitigation strategy, and the maintenance of the plan. In addition to these requirements, your plan is considered for its format and organization such that it is a user friendly document that is legible and easily understood.

We look to see if your plan meets the requirements and gauge if there is opportunity to strengthen the weaker segments of the plan. If so, we offer suggestions and recommendations for improvements often referring to additional resources or to guide the plan's developer(s) back to the FEMA "How-To Guides." In your plan updates, these recommendations may or may not be required as part of the improvement to the overall quality of submitted plans, which in turn helps to build stronger mitigation project applications. If a requirement has not been met, language will be included in red text for "Required Revisions" needed for the plan's approval. Please keep in mind that your State Hazard Mitigation Officer (SHMO) is a team member and a resource available to you during the multi-hazard mitigation planning process. Also, for information on existing structures in the floodplain and repetitive loss structures in your community, please contact the NFIP Coordinator/State Floodplain Coordinator in your community, or contact your State Hazard Mitigation Officer.

In addition, recommended revisions are provided in order to share various approaches available to meet plan requirements for each element of the crosswalk. Several resources are identified in the recommendations that may allow for more informed decision-making in the development of the mitigation strategy.

Plan Format/Organization

Reviewers look for documents that are well-organized, easy to read, and structured in a way that requirements met are easily identified. A general recommendation is to use the crosswalk elements as an outline in developing the plan's table of contents.

Adoptions

Provide unsigned copy(-ies) of the resolutions or certificates with the plan. After a plan has been determined "approvable" then the jurisdictions are asked to adopt the plan. This is to make sure that any requested revisions are captured as part of the adopted plan.

Public/Stakeholder Participation and the Planning Process

Providing supporting documentation of public/stakeholder involvement and outreach activities is strongly recommended. Documentation would include meeting notes, copies of invitations to meetings that were distributed, and sign-in sheets that indicate who and which jurisdictions were represented at planning meetings. It is also critical to describe the type of discussions held at public meetings to ensure that the mitigation strategy represents the viewpoints of all participating jurisdictions.

Risk Assessment

Identifying references for data presented in the plan is an important consideration. Referenced data should be commonly acknowledged as a reliable resource in order for the risk assessment to be meaningful. If reliable data is not available for meeting plan requirements, consider making it a mitigation action to obtain the data. Reviewers will typically include a list of internet resources for the plan preparation team in an effort to strengthen revised drafts and updates. Reviewers will have already visited many of these sites to ensure they include data specific to the participating jurisdictions. Another important consideration is to assess the interrelation between hazards, i.e. wildfire impacts that can lead to soil erosion, which then can lead to potential flash flooding. Or, beetle infestations that can lead to wildfires. In addition, an assessment of how risks vary or are unique within an individual participating jurisdiction should be included in the plan.

Mitigation Strategy

Good plans are to be driven by their goals, objectives, strategies, and priorities; not by their projects. The mitigation strategy is to be based on the risk assessment findings. Also, keep in mind that grant eligibility for mitigation is primarily focused on long-term mitigation projects and not on preparedness, which are the short-term immediate response focused projects.

Plan Maintenance

The development of a plan is intended to be an evolving process. Therefore, it is anticipated that plan updates display an effort to improve the major components of the plan including providing more details about and improving the public involvement, risk assessment, mitigation strategy, and plan maintenance activities.

Color Coding of Crosswalk Comments: Red = did not meet requirement, Blue = recommendation, Black = general comment/observation.

September 2007

PREREQUISITE(S)

Adoption by the Local Governing Body

- Multihazard Requirement §201.6(c)(5): [The local hazard mitigation plan shall include] documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).
- FMA Requirement §78.5(f): Documentation of formal plan adoption by the legal entity submitting the plan (e.g., Governor, Mayor, County Executive).

				SCO	RE	
	Location in the		STAF	ORD	F۱	ΛÍΑ
Element	Plan (section or annex and page #)	Reviewer's Comments	NOT MET	MET	NOT MET	MET
A. Has the local governing body adopted the plan?	NA	This is a multi-jurisdictional plan.				
B. Is supporting documentation, such as a resolution, included?	NA	This is a multi-jurisdictional plan.				
		SUMMARY SCOP	RE			

Multi-Jurisdictional Plan Adoption

- Multihazard Requirement §201.6(c)(5): For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.
- FMA Requirement §78.5(f): Documentation of formal plan adoption by the legal entity submitting the plan (e.g., Governor, Mayor, County Executive).

				SCO	RE	
	Location in the		STAFF	ORD	FN	MA
Element	Plan (section or annex and page #)	Reviewer's Comments	NOT MET	MET	NOT MET	MET
A. Does the plan indicate the specific jurisdictions represented in the plan?	Section I and Page 2-1	The jurisdictions represented in the plan include: Fergus County, the City of Lewistown, and the towns of Denton, Grass Range, Moore, and Winifred. The plan includes a map of Montana highlighting Fergus County a sub-area map of the County and participating jurisdictions.		x		x
B. For each jurisdiction, has the local governing body adopted the plan?	Section 1	Each participating jurisdiction adopted the plan between October and November 2004 and re-adopted the plan in 2007-2008. Recommended Revision: In the main text of the final plan, document when,		x		x

September 2007

		and by whom, the plan was formally adopted.		
C. Is supporting documentation, such as a resolution, included for each participating jurisdiction?	Section 1	The Plan includes signed copies of Resolutions signed in 2007-2008: Unincorporated Fergus County (#37-2007 signed on October 17, 2007), Town of Denton (#341 signed on July 1, 2008), City of Lewistown (#3714 signed on July 7, 2008), Town of Grass Range (#08112008b signed on August 11, 2008). The Town of Moore resolution was received by FEMA after the approval letter was signed. The Town of Moore (adoption resolution #9-08-2008) was signed on September 8, 2008.	Х	X
	1	SUMMARY SCORE	X	 X

Multi-Jurisdictional Planning Participation

- Multihazard Requirement §201.6(a)(3): Multi-jurisdictional plans (e.g., watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process ... Statewide plans will not be accepted as multi-jurisdictional plans.
- FMA Requirement §78.5(a): Description of the planning process and public involvement. Public involvement may include workshops, public meetings, or public hearings.

	I anadimu to the			SCO	RE	
	Location in the Plan (section or		STAFF	FORD	FN	MΑ
Element	annex and page #)	Reviewer's Comments	NOT MET	MET	NOT MET	MET
A. Does the plan describe how each jurisdiction participated in the plan's development?	Page 3-1-3-3 Appendix A Appendix C	The plan provides a strong discussion on how each jurisdiction participated. A series of public meetings were held to involve stakeholders, generate input, and comments for the plan. Appendix A includes a list of stakeholders identified and invited to the workshops. All participating jurisdictions are included in this list and it appears that several of the participating jurisdictions attended the meetings, but this is not supported by the sign-in sheets, because they do not indicate the organizations the attendee is representing. At the first meeting participants affirmed the plan mission statement and further identified the hazards to be profiled and critical facilities. At the second workshop participants reviewed the risk assessment results and developed		X		X

Jurisdiction: Fergus County, Montana Pre-Disaster Mitigation Plan September 2007 mitigation project ideas. The last workshop was conducted in all incorporated communities; attendees revised the draft plan, solicited comments, and discussed how to move forward. Recommended Revisions: Provide a description of all the participants, providing entity represented and title. A discussion describing what role the jurisdictions played during the planning process would improve this plan. Explain how the Mitigation Team was formed (were they appointed or selected?). Also, additional insights should be added if other discussions have occurred with these jurisdictions outside one of the noted public meetings. Refer to FEMA How-To Guide #1 on initiating a comprehensive local mitigation planning process, see Getting Started (FEMA 386-1), Steps 1-3. Χ Χ **SUMMARY SCORE**

PLANNING PROCESS:

Documentation of the Planning Process

- Multihazard Requirement §201.6(b): An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:
 - (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
 - (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
 - (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.
- Multihazard Requirement §201.6(c)(1): [The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.
- FMA Requirement §78.5(a): Description of the planning process and public involvement. Public involvement may include workshops, public meetings, or public hearings.

September 2007

				RE		
	Location in the Plan (section or		STAFF	ORD	FN	MΑ
Element	annex and page #)	Reviewer's Comments	N	S	N	s
A. Does the plan provide a narrative description of the process followed to prepare the plan?	Page 3-1-3-3 Appendix A Appendix C	The plan includes a strong description of the process followed to prepare the plan in Section 3. The plan indicates that a detailed hazard analysis was conducted in 2003 and a contractor was hired to review local media reserves, GIS data and other sources. The LEPC provided guidance to the contractor and assisted in the identification of local information outlets. In 2007 Fergus County hired another consultant, Big Sky Hazard Management LLC, to coordinate the revision process. A series of three public meetings were held to involve stakeholders, generate input, and comments for the plan. Appendix A includes a list of stakeholders identified and invited to the workshops. Recommended Revision: Describe how the process and roles were decided and any discussions, questions,		X		X
		concerns, and issues from those deciding and leading the process. This should include how the participating jurisdictions were approached and involved in the process of developing the plan and how decisions were made amongst the varying jurisdictions. For more information on the planning process and advice to jurisdictions seeking to initiate a comprehensive local mitigation planning process,				
		see Getting Started (FEMA 386-1), Steps 1				
B. Does the plan indicate who was involved in the planning process? (For example, who led the development at the staff level and were there any external contributors such as contractors? Who participated on the plan committee, provided information, reviewed drafts, etc.?)	Page 3-1-3-3 Appendix A Appendix C	Section 3 of the plan includes a discussion of who was involved in the planning process. Big Sky Hazard Management LLC, coordinated the 6-month long revision process. The Fergus County Disaster and Emergency Services Coordinator, Cheri Kilby, managed the contract for the County and evaluated		X		х

September 2007

	Í	4.*		SCO			
s ·	Location in the Plan (section or		STAFFO	ORD	FN	IA	
Element	annex and page #)	Reviewer's Comments	N	S	N	S	
		progress of the plan monthly. A series of three public meetings were held to involve stakeholders and the public, and generate input and comments for the plan. Appendix A includes a list of stakeholders identified and invited to the workshops. Fergus County Planning and Lewistown Planning are both included in the stakeholder list.					
		Recommended Revisions:					
		 Provide a description of all the participants, providing entity represented and title. 					
		 Describe who, from what agency or jurisdiction, by name and title or general public member (from what area) reviewed plan drafts and made comments on the plan. 					
		For more information on identifying the stakeholders and building the planning team, see <i>Getting Started</i> (FEMA 386-1), Step 2.					
C. Does the plan indicate how the public was involved? (Was the public provided an opportunity to comment on the plan during the drafting stage and prior to the plan approval?)	Page 3-1-3-3 Appendix A, B, and C	A series of public meetings were held to involve the public, generate input, and comments for the plan. At the first meeting, participants affirmed the plan's mission statement and further identified the hazards to be profiled and critical facilities. At the second workshop, participants reviewed the risk assessment results and developed mitigation project ideas. The last workshop was conducted in all incorporated communities; attendees revised the draft plan, solicited comments, and discussed how to move forward. Participation from the public was encouraged through press releases and paid advertisements in the local newspaper, the Lewistown News-Argus, and on the local radio station and announcements were also posted on the consultant's website. The draft plan was located at the Lewistown City library and the Fergus County DES office.		X		X	

September 2007

	Landing to the	i		SCO	RE	
	Location in the Plan (section or	⇔	STAFF	ORD	FN	1A
Element	annex and page #)	Reviewer's Comments	N	N S	N	S
D. Was there an opportunity for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the planning process?	Page 3-1-3-3 Appendix A, B, and C	A series of public meetings were held to involve the public and other interested parties. Participation from the public was encouraged through press releases and paid advertisements in the local newspaper, the Lewistown News-Argus, and on the local radio station and announcements were also posted on the consultant's website. In addition the draft plan was located at the Lewistown City library and the Fergus County DES office. Invitations were sent to active participants and those communities beyond Fergus County, thus allowing neighboring communities and regional agencies the opportunity to participate. Note: A "Needs Improvement" score on this requirement will not preclude the FMA plan from passing.		×		×
Does the planning process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information?	Page 3-2 Appendix D	The Plan indicates that information from existing plans, studies, reports, and technical hazard information was gathered by Big Sky Hazard management LLC. They contacted individuals throughout the planning process, and reviewing the initial draft plan. Many national and state documents provided background information. Table 3C identifies local plans and documents that were incorporated into the Plan. Note: A "Needs Improvement" score on this requirement will not preclude the FMA plan from passing.		x		x
		SUMMARY SCORE		Х		Х

22

September 2007

RISK ASSESSMENT: $\S 201.6(c)(2)$: The plan shall include a risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.

Identifying Hazards

- Multihazard Requirement §201.6(c)(2)(i): [The risk assessment shall include a] description of the type ... of all natural hazards that can affect the jurisdiction.
- FMA Requirement §78.5(b): Description of the existing flood hazard and identification of the flood risk, including estimates of the number and type of structures at risk, repetitive loss properties, and the extent of flood depth and damage potential.

	Lagation in the			SCC	ORE		
	Location in the Plan (section or		STAF	FORD	FN	A	
Element	annex and page #)	Reviewer's Comments	N	S	N	s	
A. Does the plan include a description of the types of all natural hazards that affect the jurisdiction? If the hazard identification omits (without explanation) any hazards commonly recognized as threats to the	Pages 4-4 to 4-6; 4-38 to 4-149	Table 4.2A identifies hazards that potentially affect communities in Fergus County and provides good information on what jurisdictions may be affected by the identified hazards and how and why it was					
jurisdiction, this part of the plan cannot receive a Satisfactory score.		identified.					
Consult with the State Hazard Mitigation Officer to identify applicable hazards that may occur in the planning area.		The plan includes information for hazards that have potential to affect the participating jurisdictions; however, avalanche and landslide hazard profiles are not included in the plan. In addition the plan does not provide an explanation for omitting these hazards. Avalanches are mentioned within the Fergus County Subdivisions (page 4-42) and landslides are mentioned within the flood hazard profile as an associated hazard.		X		×	
		The plan must include all hazards commonly recognized as threats to the jurisdictions or provide an explanation for omitting hazards.					
		Each hazard profile provides a description of the identified hazard and can be found on Pages 4-38 to 4-149					
		In most cases, the data used are more extensive than that found from readily available on-line resources. Refer to SHELDUS (www.sheldus.org)					

urisdiction: Fergus County, Montana Pre-Disaster	Mitigation Plan	Septemb	er 200
	for additional information.		
	A Flood Insurance Study, dated 1982, is available for Fergus County at http://msc.fema.gov/ and may strengthen the flood hazard profile by including a discussion on principal flooding problems. The plan indicates on Pages 4-64 that there are a total of four high hazard dams in the county. However the plan does not indicate if these dams have an Emergency Action Plan in place as required by the National Dam Safety Act. Online EPA data suggests that there are no toxic release inventory sites in Fergus County. Please see http://www.epa.gov/triexplorer/ for more information		
	on future plan updates in the event this situation changes. The plan includes several presidential declarations within the applicable hazard profiles. This information appears to be more comprehensive than that found on the Public Entity Risk Institute (PERI) Refer to http://www.peripresdecusa.org/mainframe.htm for more information.		
	Recommended Revision: Identify and include a rationale as to why landslides and avalanches were not assessed in this plan as potential hazards. More specifically include these hazards in Table 4.2A of the plan.		
	These changes made in the risk assessment will need to be reflected in the Mitigation Strategy section.		
	SUMMARY SCORE	X	X

September 2007

CCODE

Profiling Hazards

- Multihazard Requirement §201.6(c)(2)(i): [The risk assessment shall include a] description of the ... location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.
- FMA Requirement §78.5(b): Description of the existing flood hazard and identification of the flood risk,, and the extent of flood depth and damage potential.

	Location in the	·	CTAF		ORE F	FMA	
Element	Plan (section or annex and page #)	Reviewer's Comments	N	FORD S	N Pr	S	
A. Does the risk assessment identify the location (i.e., geographic area affected) of each natural hazard addressed in the plan?	Pages 4-38-4-	The plan describes the geographical area of all assessed hazards in great detail and can be found in the hazard profiles. Several of the hazards include a map, which depicts the hazard area.		×		X	
B. Does the risk assessment identify the extent (i.e., magnitude or severity) of each hazard addressed in the plan?	Pages 4-38-4- 149	The hazard profiles identify the extent of each hazard addressed in the plan. The History sections identify losses, when known. In addition, each hazard profile includes a section on magnitude, which described a realistic approximation for the worst case scenario.		х		×	
C. Does the plan provide information on previous occurrences of each hazard addressed in the plan?	Pages 4-38-4- 149	Previous occurrences of each type of hazard are addressed in the hazard profiles within the "History" section. Some of the identified hazards include tables, which list location, nature of occurrence, damage estimate, and loss/damage. Recommended Revision: It may be helpful to develop a table that lists location	×	×		×	
		of hazard, date, time, magnitude, death, injuries, property damage and crop damage in addition to the narrative description. To ensure consistency, the criteria identified, i.e. location and damage estimate, etc., should be the same for all tables.					
D. Does the plan include the probability of future events (i.e., chance of occurrence) for each hazard addressed in the plan?	Pages 4-38-4- 149	Each hazard profile discusses probability of future events within the Probability Section. This estimation is based on local historical occurrence.		Х		Х	
		SUMMARY SCORE		X		Х	

September 2007

Assessing Vulnerability: Overview

- Multihazard Requirement §201.6(c)(2)(ii): [The risk assessment shall include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.
- FMA Requirement §78.5(b): Description of the existing flood hazard and identification of the flood risk,, and the extent of flood depth and damage potential.

	Location in the					
	Plan (section or		STAF	FORD	FN	/IA
Element	annex and page #)	Reviewer's Comments	N	S	N	s
A. Does the plan include an overall summary description of the jurisdiction's vulnerability to each hazard? A. Does the plan include an overall summary description of the jurisdiction's vulnerability to each hazard?	annex and page #) Pages 4-38-4- 149 and 4-151	The plan includes Table 4.5B which lists the hazard categorization for each of the incorporated communities participating in the plan. The hazard profiles include vulnerabilities sections that identify critical facilities, population, historic and social values, and future development. Although this information is good it is not in relationship to the participating jurisdictions. Recommended Revisions: This information could include types of structures or land uses, infrastructure and critical facilities most at risk and unique within each jurisdiction. The plan can be further strengthened by better relating types of hazards and the specific impact the hazard has on a community. Are there schools and grocery stores in places likely to flood – where? Are there older structures or neighborhoods that are either historic or built before building codes were developed that address high winds and/or snow loads? – where? Are there properties or roads that have been impacted by repetitive flooding? Which power lines are most likely to be impacted by repetitive winter ice storms or strong winds?	N	X		X

September 2007

·		vulnerability and include in the mitigation strategy actions for collecting the data to improve future vulnerability assessments efforts. For a discussion on vulnerability assessment overview, see <i>Understanding Your Risks</i> (FEMA 386-2), Step 3, Worksheet #3a, Inventory Assets.		
B. Does the plan address the impact of each hazard on the jurisdiction?	Pages 4-38-4- 149	The hazard profiles identify past events and provide time periods and a general description of the event. The plan would be enhanced if all the tables found within the history section included: location, loss structures, injuries, deaths, and costs. The hazard profiles also include detailed sections on vulnerabilities, which describe critical facilities and special needs facilities. The location of these facilities is generally mapped, which allows for the comparison of building locations and hazard areas. Recommended Revision: Please include location, loss structures, injuries, deaths, and costs in the history section of the hazard profiles.	X	X
		SUMMARY SCORE	Х	X

Assessing Vulnerability: Identifying Structures

- Multihazard Requirement §201.6(c)(2)(ii)(A): The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard area
- FMA Requirement §78.5(b): Description of the existing flood hazard and identification of the flood risk, including estimates of the number and type of structures at risk, repetitive loss properties,....

	Location in the			SCORE			
	Plan (section or		STAF	FORD	FN	ΜA	
Element	annex and page #)	Reviewer's Comments	N	S	N	S	
A. Does the plan describe vulnerability in terms of the types and numbers of existing buildings (including repetitive loss structures), infrastructure, and critical facilities located in the identified hazard areas?	Pages 4-7-4-26 and 4-38-4-149	The plan includes a general discussion on existing buildings within the hazard profiles under the vulnerabilities section.	x		Х		
		The plan does an excellent job in identifying hazard-prone areas throughout the county and provides					

September 2007

potential loss estimates for hazards assessed; however the link to numbers and types of existing buildings and infrastructure is not complete.

The plan also includes detailed information on critical facilities, special facilities, and infrastructure on Pages 4-7and 4-26, however this information is not in related to identified hazards.

Recommended Stafford Revision:

Identify the kinds and number of buildings (e.g., residential, commercial, institutional, recreational, industrial, and municipal); infrastructure, (e.g., roadways, bridges, utilities, and communications systems); and critical facilities (e.g., shelters, hospitals, police, and fire stations) that exist in hazard prone areas.

Required FMA Revision:

The plan did not include a discussion on repetitive loss structures

While not required by the Rule for Stafford, for FMA it is necessary to inventory structures located within areas that have repeatedly flooded and collect information on past insurance claims. In addition, it is necessary to describe repetitive loss structures in the plan.

For information on existing structures in the floodplain and repetitive loss structures in your community, please contact the NFIP Coordinator/State Floodplain Coordinator in your community, or contact your State Hazard Mitigation Officer. www.bureau.net is an internet -based resource that is available to your SHMO to obtain biennial reports that indicate structures located in identified and mapped flood hazard areas.

Note: A "Needs Improvement" score on this requirement will not preclude the Stafford plan from passing.

September 2007

B. Does the plan describe vulnerability in terms of the types and numbers of future buildings, infrastructure, and critical facilities located in the identified hazard areas?	Pages 4-38-4- 149	The hazard profiles include a section on future development that generally describes projected development and existing regulations and policies. However, the plan does not identify the specific type and numbers of buildings anticipated in identified hazard areas. Recommended Revisions: Identify the types of buildings (e.g., residential, commercial, institutional, recreational, industrial, and municipal buildings), infrastructure (e.g., roadways, bridges, utilities, and communications systems), and critical facilities (e.g., shelters, hospitals, police, and fire stations). Information on proposed buildings, infrastructure, and critical facilities, including planned and approved development, may be based on information in the comprehensive or land use plan, zoning maps, assessor's records for subdivided parcels, capital improvement plans/projects, DOT projects, economic development plans, and real estate ads. Identify buildings, infrastructure, and critical facilities that are vulnerable to more than one hazard. For a discussion on identifying vulnerable structures and detailed inventories, see <i>Understanding Your Risks</i> (FEMA 386-2), Step 3, Worksheet #3a and #3b, Inventory Assets.		X	
		Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.			
		SUMMARY SCORE	X	Х	

September 2007

Assessing Vulnerability: Estimating Potential Losses

• Multihazard Requirement §201.6(c)(2)(ii)(B): [The plan should describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(i)(A) of this section and a description of the methodology used to prepare the estimate

				SCORE			
	Location in the		STAF	FORD	FN	IA	
Element	Plan (section or annex and page #)	Reviewer's Comments	N	s	N	S	
A. Does the plan estimate potential dollar losses to vulnerable structures?	Page 4-7 to 4-24 and 4-40 to 4-148	The hazard profiles include a section on vulnerabilities, which identifies potential dollar losses for each applicable hazard. The plan includes a great discussion and tables on critical facilities, special needs facilities, and infrastructure within Fergus County. The tables include replacement value; however they are not in relationship to the identified hazards. Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.		X		X	
B. Does the plan describe the methodology used to prepare the estimate?	Page 4-2 and 4-40 to 4-148	The plan indicates that critical and special needs facilities were generally mapped based on their address. The mapping of the facilities allowed for a comparison of approximate building locations to the hazard areas. Where known, the structural replacement value and contents values, on record from County and Town insurance records, were provided. Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.		×		X	
		SUMMARY SCORE		Х		X	

September 2007

Assessing Vulnerability: Analyzing Development Trends

• Multihazard Requirement §201.6(c)(2)(ii)(C): [The plan should describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

	Location in the			SCO	RE	
	Plan (section or		STA	FFORD	F۱	ΛA
Element	annex and page #)	Reviewer's Comments	N	S	N	S
A. Does the plan describe land uses and development trends?	Pages 4-31 to 4-37; 4-38 to 4-149	The plan includes a discussion on future development within the hazard profiles. This section mainly describes existing buildings and structures. The plan also includes a discussion on current land uses and a general discussion on future development. The plan states that growth in Fergus County has been fairly steady over the past forty years with recent years seeing declines. This section also includes information on existing subdivision codes and other regulations for Fergus County and				3
		the Town of Lewistown. Recommended Revisions:			 	
		In addition to describing subdivision codes and other applicable regulations, provide a description of development that is occurring or is planned to occur so that mitigation options can be considered in future land use decisions.		X		x
		 Describe development trends occurring within the jurisdiction (e.g., describe the types of development occurring, location, expected intensity, and pace by land use). 				
		 Provide a discussion on land use and development trends, where it is (or is not) happening, and the types of structures being built to accommodate growth or have gone vacant and have opened possibilities to removal from a hazard area. 				
		 Overlay a land use map with identified hazard areas. 			~	
		 Review data maps, comprehensive plans, and 				l

urisdiction: Fergus County, Montana Pre-Disaster Mitigation Plan		Septe	mber	200		
*	*	6	land use policies to assess the appropriate lands for development.			
			 Use the CWPP as a PDM plan reference and incorporate relevant findings into the PDM plan. 			
			Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.			
			SUMMARY SCORE	X		X

Multi-Jurisdictional Risk Assessment

- Multihazard Requirement §201.6(c)(2)(iii): For multi-jurisdictional plans, the risk assessment must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.
- FMA FEMA 299 Guidance: The Plan should be coordinated with, and ideally developed in cooperation with, all of the local jurisdictions within the geographical area.

			L	SCO	₹E	
	Location in the Plan (section or	Reviewer's Comments	STAFFORD		FM	ΛA
Element	annex and page #)		N	S	N	s
A. Does the plan include a risk assessment for each participating jurisdiction as needed to reflect unique or varied risks?	Pages 4-40-4- 149 and 4-150- 151	The plan discusses varied risks among the participating jurisdictions throughout the hazard profiles. In addition Table 4.5B lists the hazard categorizations for each of the participating jurisdictions. Note: A "Needs Improvement" score on this requirement will not preclude the FMA plan from passing.		X		×
		SUMMARY SCORE		Х		Х

MITIGATION STRATEGY: $\S 201.6(c)(3)$: The plan shall include a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.

Local Hazard Mitigation Goals

- Multihazard Requirement §201.6(c)(3)(i): [The hazard mitigation strategy shall include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.
- FMA Requirement §78.5(c): The applicant's floodplain management goals for the area covered by the plan.

September 2007

Element A Does the plan include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards? (GOALS are long-term; represent what the community wants to achieve, such as "eliminate flood damage"; and are based on the risk assessment findings.) Location in the Plan (section or annex and page #) Pages 5-2-5-6			RE			
≪			STAF	FORD	FN	1A
Element	,	Reviewer's Comments	N	S	N	S
goals to reduce or avoid long-term vulnerabilities to the identified hazards? (GOALS are long-term; represent what the community wants to achieve, such as "eliminate flood damage"; and are based on	Pages 5-2-5-6	The plan includes four goals. The majority are mitigation focused and long-term. Recommended Revisions: The plan's goals, objectives, strategies, priorities, and projects are a mixture of prevention, preparedness, response, and mitigation. While mitigation does have elements of these other phases of a disaster, the emphasis for this plan should in future updates focus more on the mitigation strategy of its participating jurisdictions. Consider including goals for all identified hazards. For more information on developing local mitigation goals and objectives, see Developing the Mitigation Plan (FEMA 386-3), Step 1.		X		×
		SUMMARY SCORE		Х		X

Identification and Analysis of Mitigation Actions

- Multihazard Requirement §201.6(c)(3)(ii): [The mitigation strategy shall include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.
- FMA Requirement §78.5(d): Identification and evaluation of cost-effective and technically feasible mitigation actions considered.

	1 41 1 - 41			SCO	RE	
	Location in the Plan (section or		STAFF	ORD	FI	MA
Element	annex and page #)	Reviewer's Comments	N	s	N	s
A. Does the plan identify and analyze a comprehensive range of specific mitigation actions and projects for each hazard?	Pages 5-2-5-6	The plan identifies and analyzes a broad range of mitigation measures.		Х		X
		Recommended Considerations for Mitigation			}	

September 2007

Measures: 3 FEMA's five Hazard Mitigation Assistance grant programs provide state and local government's many opportunities to apply and receive up to 75% federal share for eligible mitigation actions and activities to help reduce potential damage from identified hazards and protect life and property. Flood hazard areas and/or protection of Floodinsured properties Voluntary acquisition projects Relocation of public or private structures Elevation of public or private structures Protective measures for utilities, water and sanitary sewer systems and/or infrastructure (roads and bridges) Storm water management projects (system improvements, culverts, retention or detention basins) Localized flood control projects (bank stabilization designed specifically to protect critical facilities) Stream channel improvements to protect the built environment Tornado/Wind hazard areas Structural retrofitting and non-structural retrofitting Construction of safe rooms or community shelters Wildfire hazard areas to protect urban-wild land Vegetation management (defensible space, thinning, fuel breaks) Earthquake hazard areas Seismic retrofitting of pubic structures B Do the identified actions and projects address Pages 5-2-5-6 The plan includes several sound projects that reducing the effects of hazards on new buildings address reducing the effects of hazards on new Χ Х and infrastructure? buildings and include: developing countywide growth

Jurisdiction: Fergus County, Montana Pre-Disaster Mitigation Plan

September 2007

CCODE

		policy that encourages growth in low hazard areas, update subdivision regulations, update building codes.		t.	
		Note: A "Needs Improvement" score on this requirement will not preclude the FMA plan from passing.			
C. Do the identified actions and projects address reducing the effects of hazards on existing buildings and infrastructure?	Pages 5-2-5-6	The plan includes one mitigation project that address reducing affects on existing buildings and includes developing a county policy concerning building materials used in high-risk wild land urban interface areas on existing structures and new construction.	X		X
		SUMMARY SCORE	X		Χ

Implementation of Mitigation Actions

- Multihazard Requirement: §201.6(c)(3)(iii): [The mitigation strategy section shall include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.
- FMA Requirement §78.5(d): Identification and evaluation of cost-effective and technically feasible mitigation actions considered; and
- FMA Requirement §78.5(e): Presentation of the strategy for reducing flood risks and continued compliance with the NFIP, and procedures for ensuring implementation, reviewing progress, and recommending revisions to the plan.

	Location in the		L		KE	
	Plan (section or		STAFFORD		F	MΑ
Element	annex and page #)	Reviewer's Comments	N	S	N	S
A. Does the mitigation strategy include how the actions are prioritized ? (For example, is there a discussion of the process and criteria used?)	Page 5-7 to 5-10	The plan explains that a prioritization model was used that took the following factors into account: cost, staff time, feasibility, population benefit, property benefit, values benefit, maintenance, and hazard rating. Each of the factors was ranked qualitatively for each of the projects. The methods used to assign a category and the associated score is shown in Table 5.2A		X		x
		Note: A "Needs Improvement" score on this requirement will not preclude the FMA plan from passing.				
B. Does the mitigation strategy address how the	Pages 5–11 to 5-	The implementation process is described in Section		X		X

September 2007

actions will be implemented and administered? (For example, does it identify the responsible department, existing and potential resources, and timeframe?)	18	5.4. Table 5.4A includes information for each action related to the managing agencies and funding sources. Table 5.4B identifies the mitigation projects and responsible stakeholders, Table 5.4C lists the mitigation actions and their timeframe for completion.	u v	
B.1. Does the mitigation strategy address continued compliance with the NFIP?	Page 5-5	The Plan includes mitigation strategies that address continued compliance with the NFIP, which includes reinstating the Town of Grass Range and completing the required activities for the Town of Winifred to join. Note: A "Needs Improvement" score on this requirement will not preclude the Stafford plan from passing.	X	X
C. Does the prioritization process include an emphasis on the use of a cost-benefit review (see page 3-36 of <i>Multi-Hazard Mitigation Planning Guidance</i>) to maximize benefits?	Page 5-7-5-10	The plan explains that a prioritization model was used that took cost and population benefit, property benefit and values benefit into account Note: A "Needs Improvement" score on this requirement will not preclude the FMA plan from passing.	X	x
C.1. Does the mitigation strategy emphasize costeffective and technically feasible mitigation actions?		The plan explains that a prioritization model was used that took cost and feasibility into account. Note: A "Needs Improvement" score on this requirement will not preclude the Stafford plan from passing.	X	x
		SUMMARY SCORE	Х	Х

September 2007

SCORE

Multi-Jurisdictional Mitigation Actions

- Multihazard Requirement §201.6(c)(3)(iv): For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.
- FMA FEMA 299 Guidance: The Plan should be coordinated with, and ideally developed in cooperation with, all of the local jurisdictions within the geographical area.

				SCO	RE	
	Location in the		STAFFORD		FM	ΛA
Element	Plan (section or annex and page #)	Reviewer's Comments	N	s	N	S
A Does the plan include at least one identifiable action item for each jurisdiction requesting FEMA approval of the plan?	Pages 5-16-5-17	Table 5.4B identifies jurisdictions that the identified projects will impact. All participating jurisdictions are included in the table.		×		×
		SUMMARY SCORE		x		X

PLAN MAINTENANCE PROCESS

Monitoring, Evaluating, and Updating the Plan

- Multihazard Requirement §201.6(c)(4)(i): [The plan maintenance process shall include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.
- FMA Requirement §78.5(e): Presentation of the strategy for reducing flood risks and continued compliance with the NFIP, and procedures for ensuring implementation, reviewing progress, and recommending revisions to the plan.

Element A. Does the plan describe the method and schedule for monitoring the plan? (For example, does it identify the party responsible for monitoring and include a schedule for reports, site visits, phone calls, and	Landing to the		1	300	NE.	
	Location in the Plan (section or		STAF	ORD	F۱	ΛA
Element	annex and page #)	Reviewer's Comments	N	s	N	S
the party responsible for monitoring and include a	Page 6-1	The plan provides a strong discussion on the method and schedule for monitoring. The Fergus County Local Emergency Planning Committee will monitor the Plan. The committee will discuss mitigation progress quarterly. The status of projects will be reported and new projects will be initiated during this time. In addition, an annual Mitigation Year in Review meeting will be conducted.		X		X
B. Does the plan describe the method and schedule for evaluating the plan? (For example, does it identify the party responsible for evaluating the plan and include the criteria used to evaluate the plan?)	Page 6-1-6-2	The description of the method and schedule for evaluating the plan is very strong. The evaluation will be conducted by the Fergus County Local Emergency Planning Committee annually at their		X		X

September 2007

		January "Mitigation Year in Review" meeting. Methods of implementing and maintaining the plan will be evaluated for success and improvements.	\$1	Š	
C. Does the plan describe the method and schedule for updating the plan within the five-year cycle?	Page 6-1to 6-2	The plan does include the method and schedule for updating the Plan within the five-year cycle and Table 6.3A includes the schedule for plan updates. Note: A "Needs Improvement" score on this requirement will not preclude the FMA plan from passing.	X		×
		SUMMARY SCORE	X		X

Incorporation into Existing Planning Mechanisms

• Multihazard Requirement §201.6(c)(4)(ii): [The plan shall include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.

	Location in the			RE	E	
	Plan (section or		STAFFORD		F۱	MΑ
Element	annex and page #)	Reviewer's Comments	N	s	N	s
A. Does the plan identify other local planning mechanisms available for incorporating the requirements of the mitigation plan?	Pages 5-19 to 5- 22	The Plan includes a strong discussion on local planning mechanisms available for incorporating the requirements of the mitigation plan. Table 5.5B shows examples of projects and how they can be incorporated into existing and future planning documents. Note: A "Needs Improvement" score on this requirement will not preclude the FMA plan from passing.		×		X
B. Does the plan include a process by which the local government will incorporate the requirements in other plans, when appropriate?	Pages 5-19 to 5- 22	The plan states that as participating jurisdictions develop new plans and update existing plans, information from the PDM will be utilized. In addition, the plan includes a schedule for the estimated revision date for existing and future plans. Note: A "Needs Improvement" score on this requirement will not preclude the FMA plan from passing.		×		X
		SUMMARY SCORE		Х		Х

September 2007

Continued Public Involvement

• Multihazard Requirement §201.6(c)(4)(iii): [The plan maintenance process shall include a] discussion on how the community will continue public participation in the plan maintenance process.

				SCO	RE	
	Location in the		STAFF	ORD	F۱	ΛA
Element	Plan (section or annex and page #)	Reviewer's Comments	N	s	N	S
A. Does the plan explain how continued public participation will be obtained? (For example, will there be public notices, an on-going mitigation plan committee, or annual review meetings with stakeholders?)	Page 6-2-6-3	The plan states that the public is invited to attend the October Fergus County LEPC meeting each year on the third Thursday of October. A press release will be distributed annually to the Lewistown New Argus newspaper prior to the meeting. Year round comments may be submitted. Note: A "Needs Improvement" score on this requirement will not preclude the FMA plan from passing.		X		X
		SUMMARY SCORE		X		Х

September 2007

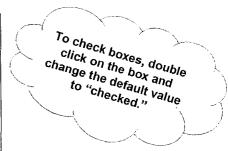
Matrix A: Profiling Hazards

This matrix can assist FEMA and the State in scoring each hazard. Local jurisdictions may find the matrix useful to ensure that their plan addresses each natural hazard that can affect the jurisdiction. **Completing the matrix is not required**.

 i_{ij}

Note: First, check which hazards are identified in requirement §201.6(c)(2)(i). Then, place a checkmark in either the N or S box for each **applicable** hazard. An "N" for any element of any identified hazard will result in a "Needs Improvement" score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk.

Hazard Type	Hazards Identified Per Requirement §201.6(c)(2)(i)	A. L.o	ocation	B. E	extent	C. Pre Occur	evious rences	D. Probability of Future Events		
	Yes	N	S	N	S	N	S	N	S	
Avalanche									Ш	
Coastal Erosion										
Coastal Storm										
Dam Failure			$\overline{\boxtimes}$		$\overline{\boxtimes}$		$\overline{\boxtimes}$		$\overline{\boxtimes}$	
Drought		一	\boxtimes	ΙΠ	Ħ		Ħ		$\overline{\boxtimes}$	
Earthquake		H	Ħ	l H	Ħ		Ħ		Ħ	
Expansive Soils		П	Ħ		Ħ.		Ħ		П	
Extreme Heat		H	\boxtimes		\boxtimes		$\overline{\boxtimes}$		Ħ	
Flood			Ħ	ΙĦ	Ħ		Ħ	l H	Ħ	
Hailstorm			Ħ		\boxtimes	ΙĦ	Ħ		Ħ	
Hurricane		H	Ä	l Ħ	Ħ		Ħ			
Land Subsidence		H	Ħ		Ħ		Ħ		Ħ	
Landslide			片		Ħ		Ħ		Ħ	
Severe Winter Storm			M		X		X		Ħ	
Tornado		H	Ħ	l H	X		X		Ħ	
Tsunami		H	Ħ		Ħ				Ħ	
Volcano			\boxtimes		X		X		X	
Wildfire		H		ΙĦ	X		Ħ		X	
Windstorm		H			X		Ħ		Ħ	
Communicable Disease		H	\boxtimes		X		Ħ		Ħ	
Critical Material			×		Ħ		X			
HazMat		H	Ħ		X		X		Ħ	
Terrorism and Civil Unrest		H	\boxtimes		X		X			
Transportation Accident							\boxtimes		\boxtimes	



Legend:

§201.6(c)(2)(i) Profiling Hazards

A. Does the risk assessment identify the location (i.e., geographic area affected) of each hazard addressed in the plan?

B. Does the risk assessment identify the extent (i.e., magnitude or severity) of each hazard addressed in the plan?

C. Does the plan provide information on previous occurrences of each natural hazard addressed in the plan?

D. Does the plan include the probability of future events (i.e., chance of occurrence) for each hazard addressed in the plan?

September 2007

To check boxes, double

click on the box and click on the box and change the default value to "checked."

Matrix B: Assessing Vulnerability

This matrix can assist FEMA and the State in scoring each hazard. Local jurisdictions may find the matrix useful to ensure that their plan addresses each requirement. Completing the matrix is not required.

Note: First, check which hazards are identified in requirement §201.6(c)(2)(i). Then, place a checkmark in either the N or S box for each applicable hazard. An "N" for any element of any identified hazard will result in a "Needs Improvement" score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk.

Note: Receiving an N in the shaded columns will not preclude the plan from passing.

Hazard Type	Hazards Identified Per Requirement §201.6(c)(2)(i)		Sum Descrij Vulne	verall mary otion of rability	lmį	lazard pact	A. Types and Number of Existing Structures in Hazard Area (Estimate) N S N S N S S S S S S S S S S S S S S		per of cure cures in d Area mate)	Losses		Estimate	B. Methodology			
A 1	Yes		N	<u> </u>	N	S	털	N	S	N	<u> </u>	<u> </u>	N	S	N	<u> </u>
Avalanche Coastal Erosion		Overview	Ø	닏			뷿	\bowtie			닏	Potential	Ø		\boxtimes	닏ㅣ
Coastal Storm	님	e.		님		님		닏			닏	Po To				닏ㅣ
Dam Failure							 	닏			닏	ρ			닏	닐ㅣ
		یخ					Identifying	×	닏		닏	a∰.		\boxtimes	ᅵ닏	\boxtimes
Drought Earthquake		Vulnerability:					1 1					Estimating			片	
Expansive Soils		era	님			Ä	حذا	×				П	ᅵ片		님	
Extreme Heat		/ulr	님				를					خ			ᅵ片	
Flood	\boxtimes		: H			X	era	X				≣			ᅡ	
Hailstorm		Assessing	H				Vulnerability:			\boxtimes		Vulnerability:			님	
Hurricane		ses	H				9	씜				들				
Land Subsidence	H		H	님	님	님	Assessing				님	5	l H			
Landslide		(ii)	\boxtimes	H .		H	Ses	Ħ				Sin				
Severe Winter Storm	×	33	H			Ħ			님			Assessing				
Tornado	\boxtimes	9)9:	H			\boxtimes	€	\square		\boxtimes	H	As				
Tsunami		§201.6(c)(2)(ii)	Ħ			Ä	(2)		H						ᅵᅢ	
Volcano		iòn	Ħ			\boxtimes	§201.6(c)(2)(ii)					\$201.6(c)(2)(ii)			l H	
Wildfire			Ħ	X		X	2		\Box) <u>9</u>				
Windstorm	\boxtimes		Ħ		ΙĦ	\boxtimes	\$2	X		\boxtimes		2			l H	
Communicable Disease	\boxtimes		\Box		ΙĦ			X				82	lΠ		l H	
Critical Material	\boxtimes					\boxtimes		\boxtimes				1	ΙĦ		l H	
HazMat			\Box		lП	\boxtimes		×	Ħ	X	H					\boxtimes
Terrorism	\square			Ø				Ħ	Ħ	X X	- 片	 	Ħ		H	
Transportation Accident	\boxtimes			\boxtimes		Ø							ΙΠ	B	l li	Image: square of the control of the c

Legend:

§201.6(c)(2)(ii) Assessing Vulnerability: Overview

A. Does the plan include an overall summary description of the jurisdiction's vulnerability to each hazard?

B. Does the plan address the impact of each hazard on the jurisdiction?

^{§201.6(}c)(2)(ii)(A) Assessing Vulnerability: Identifying Structures

B. Does the plan describe vulnerability in terms of the types and numbers of future buildings, infrastructure, and critical facilities located in the identified hazard areas?

^{§201.6(}c)(2)(ii)(B) Assessing Vulnerability: Estimating Potential Losses

September 2007

- A. Does the plan describe vulnerability in terms of the types and numbers of existing buildings, infrastructure, and critical facilities located in the identified hazard areas?
- A. Does the plan estimate potential dollar losses to vulnerable structures?

Matrix C: Identification and Analysis of Mitigation Actions

B. Does the plan describe the methodology used to prepare the estimate?

This matrix can assist FEMA and the State in scoring each hazard. Local jurisdictions may find the matrix useful to ensure consideration of a range of actions for each hazard. **Completing the matrix is not required.**

Note: First, check which hazards are identified in requirement §201.6(c)(2)(i). Then, place a checkmark in either the N or S box for each **applicable** hazard. An "N" for any identified hazard will result in a "Needs Improvement" score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk.

Hazard Type	Hazards Identified Per Requirement §201.6(c)(2)(i)	Range o	rehensive of Actions rojects
	Yes	N	S
Avalanche			
Coastal Erosion			
Coastal Storm			
Dam Failure		🔲	\boxtimes
Drought			
Earthquake			\boxtimes
Expansive Soils			
Extreme Heat			
Flood			
Hailstorm			\boxtimes
Hurricane			
Land Subsidence			
Landslide			
Severe Winter Storm			$\overline{\boxtimes}$
Tornado		ΙĒ	
Tsunami			i i
Volcano			$\overline{\boxtimes}$
Wildfire			⊠ l
Windstorm			
Communicable Disease		l Ħ	$\overline{\square}$
Critical Material			岗
HazMat		l H	
Terrorism		l Ħ	$\overline{\bowtie}$
Transportation Accident			\boxtimes



Legend:

§201.6(c)(3)(ii) Identification and Analysis of Mitigation Actions

A. Does the plan identify and analyze a comprehensive range of specific mitigation actions and projects for each hazard?